

Notice of Allowability

Application No.

10/617,470

Examiner

David Nhu

Applicant(s)

CHANG ET AL.

Art Unit

2818

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 12/20/04.
2. ☒ The allowed claim(s) is/are 1-5 and 12-20.
3. ☒ The drawings filed on 11 July 2003 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

EXAMINER'S AMENDMENT

1. Applicant's election of claims 1-5, 12-20 is acknowledged. Because Applicant did not distinctly and specifically point out the supposed error in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)). **Applicant have the right to file a divisional application covering the subject matter of the non-elected claims 6-11.**

The traversal is on the ground(s) that see the election paper. This is not found persuasive because the fields of search for method' and device claims are NOT coextensive and the determinations of patentability of method and device claims are different, that is process limitations and device limitations are given weight differently in determining the patentability of the claimed inventions. Also, the strategies for doing text searching of the device claims and method claims are different. Thus, separate searches are required.

The requirement is still deemed proper and is therefore made **FINAL**.

2. An examiner's amendment to the record appears below. Should the change and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

The application has been amended as follows:

Cancel claims 6-11.

REASONS FOR ALLOWANCE

3. Claims 1-5, 12-20 are allowed.

4. The following is an examiner's statement of reasons for allowance: None of the references of record teaches or suggests as cited in claims 1, 12: removing a portion of the second oxide

Art Unit: 2818

layer and the gate layer to form a first opening in the second oxide layer and a second opening in the gate layer, the first and second openings exposing a portion of the first oxide underneath the gate layer, a width of the second opening being bigger than a width of a narrowest region of the first opening in the second oxide layer so that the gate layer is pulled back horizontally underneath the second oxide layer; forming a third oxide layer in the first and second openings, the third oxide layer conforming to a contour thereof; removing a portion of the third oxide layer and the first oxide layer to make a third opening (as cited in claim 1); removing a portion of the shield oxide layer and the floating gate layer to form a first opening in the shield oxide layer and a second opening in the floating gate layer, the first and second openings exposing a portion of the coupling oxide underneath the floating gate layer, a width of the second opening being bigger than a width of a narrowest region of the first opening in the shield oxide layer so that the shield oxide layer shields the floating gate layer and the coupling oxide layer underneath from the damaged; forming a spacer oxide layer in the first and second openings, the spacer oxide layer conforming to a contour thereof; removing a portion of the spacer oxide layer and the coupling oxide layer to make a third opening (as cited in claim 12).

5. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Art Unit: 2818

CONCLUSION

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Wang (6,773,989 B2): Self-Aligned Method of Forming a Semiconductor Memory Array of Floating Gate Memory Cells with Control gate Protruding Portions.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Nhu, (571)272-1792. The examiner can normally be reached on Monday-Friday from 7:30 AM to 5:00 PM.

The examiner's supervisor, David Nelms can be reached on (571)272-1787.

The fax phone number for the organization where this application or proceeding is assigned is (703)872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956

David Nhu



December 21, 2004



DAVID NHU
PRIMARY EXAMINER